> **Transforming Teacher Talent: Aspire Public Schools Comprehensive Approach to Effective Teaching in Low-Income Schools**

**Project Narrative**

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## Competitive Preference Priorities

### Technology

t3 will radically change the way we support and develop teachers by introducing cutting-edge technology into every step of the process.  Through one integrated, easy-to-use system, teachers will have access everything they need to both drive student achievement and to take the reins in their own professional development.

As soon as a teacher logs into t3, PD supports targeted just for her pop up. Much like Netflix's or Amazon's user recommendations, t3 will make recommendations about the PD supports most needed by an individual teacher. Because t3 tracks everything about a teacher -- including formal and informal evaluations, student data, coaching sessions, and PD tools they've used – it can measure which supports had the highest impact on teacher effectiveness and make recommendations accordingly.

t3 also provides a student data portal, which provides answers to real-time questions, like which students are likely to struggle with the next lesson based on last week's assessment. Within t3, teachers can access recommendations for other teachers – both at their school and at Aspire overall – who've been very successful in teaching the lesson they're planning. Finally, teachers can access the "How Am I Doing" portal to see both summative and informal assessment feedback. That feedback is aligned to the individually-targeted PD recommendations they started with – leaving them feeling prepared for a successful lesson.

Coaches' work will also be significantly transformed by t3 technology.  Instead of scribbling their insights about a teacher into notebooks or emails, they'll be tracking their work with teachers using t3's new informal observation tool and coach dashboard.  That will enable us to document, identify, and scale the most effective coaching practices.

### Productivity

To meet our audacious goal – doubling the percentage of highly effective teachers in Aspire classrooms – we must empower teachers to learn and grow at a radically faster pace.  We will do that through the introduction of our t3 tool, which will transform the way that teachers and coaches use their time. By integrating the entire suite of services that a teacher needs over their lifecycle (e.g., recruiting and onboarding support, formal evaluation, informal evaluation, student data, PD supports) into one easy-to-use system and by more effectively leveraging

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coaches' expertise, we will save teachers valuable time. But t3 will not only save time; it will also radically transform the way that teachers use their time. Every minute spent on professional development will be much higher-impact because teachers will receive differentiated PD supports through our recommendation engine, rather than the typical "one size fits all approach." Our new informal observation tools will give teachers real-time feedback on their strengths and weaknesses, and once a weakness has emerged, teachers will have quick, easy access to the exact tools proven most high-impact for them as an individual learner. Every hour spent on PD will be much more productive because it is both targeted to the individual learner and seamlessly integrated into other teacher effectiveness tools.

## Section A: Need for the Project

### Section A(1): Our proposal represents an exceptional approach to increasing the number and percentage of highly effective teachers in low-income schools.

**Aspire Public Schools aims to double the number of highly-effective teachers in our classrooms by the end of the grant period** our pursuit of our ultimate goal of graduating every single Aspire student ready-for-college. Our students are 75% low-income and 80% minority – populations that typically do not succeed in K-12, let alone college – so this is an audacious goal. We will accomplish this goal through our innovative **Transforming Teacher Talent (t3) system**. t3 will fill the gaps in Aspire's new annual teacher evaluation system by leveraging innovative technology to change the way Aspire approaches coaching, professional development resources, and teacher recruiting.

Aspire is uniquely well positioned to reach our goal with the support of an i3 grant. We bring three key assets required for success: our strong culture of leveraging data to eliminate the achievement gap, our unprecedented progress in developing a comprehensive teacher effectiveness system, and the technology vision and expertise necessary to make our professional development exponentially more effective than ever before.

The technology we build through t3 will enable us to fundamentally change how we approach professional development. Currently, we use strong teaching standards and an evaluation process to help teachers understand how well they are performing. Teachers know how they are doing today, and they know where we want them to be tomorrow. What they do not know – and what we will provide them through our brand new t3 initiative – is a pathway for how to get to that mastery.

We will provide that pathway to mastery through the steps outlined below.

**Step 1: Technology Support for Coaching.** We've already built a multiple-measure *annual* evaluation system to help principals track teacher progress. This evaluation system uses both state standardized tests and biannual formal evaluations. This system captures the big picture, accurately telling teachers where they are and what they need to work on. The next step is to provide the supports that actually lead to a transformation in teaching practice. We need to pay attention to the details, to the hundreds of little mentorship moments that occur between teachers, principals, and coaches every week.  We will provide this in-depth, ongoing support through the use of three key tools:

- A tablet-based **Informal Observation Tool** that makes it easy to capture data during regular classroom walkthroughs;

- A R**emote-Coaching Solution** (e.g., videoconferencing and related software) that enables coaches to maximize the time spent doing real-time coaching at our schools across California;

- A **coaching dashboard** that helps coaches, principals, and teachers track and share the issues and improvement strategies they discuss together.

As with all of Aspire's tools, these solutions will be designed collaboratively with educators, to ensure that they are truly user-friendly and can be quickly adopted.  By removing paper processes and travel time, we will make coaching less labor-intensive.  As an added benefit, once we develop tools that *support* coaching on a day-to-day basis, we will also be *tracking* coaching on a day-to-day basis.  That tracking will enable us to **provide teachers a real-time understanding of their improvement**.  We'll also have record of what coaching strategies mentors used with each teacher.  This data will eventually enable us to **identify and replicate the most high-impact coaching practices**, increasing the effectiveness of all of our coaches and shortening the training time required for new coaches.  Together, these increases in efficiency and efficacy will make coaching a sustainable investment, even for highly resource-constrained school systems like Aspire.

**Step 2: Customized, Data-Driven PD Resources.**  Once we've implemented t3, we'll have access to a huge store of data, both from annual summative evaluations and day-to-day coaching, about each of our teachers' strengths and skill gaps.  We will use this data to build our learning management system's (LMS's) professional development (PD) recommendation engine, similar to that used by Netflix and Amazon to recommend movies and books to their customers.  Our LMS system currently connects a teacher with videos, books, and articles that target the skill gaps identified during formal and informal observations using the College Ready Teaching Framework (Appendix J).

Aspire is already working on the technology for this recommendation engine in collaboration with our partner Formative Learning, a software startup that specializes in teacher observations and PD. With funding support from i3, the next steps we will take to make this technology truly revolutionary are:

- **Build a Cycle of Inquiry into our LMS recommendation engine**. Our LMS already recommends resources to help teachers focus on skills we know they need – the next step is to use the data we're collecting to take this algorithm and use it to recommend resources that are most effective. Because we have use data to show which resources each teacher uses, and performance data to show which teachers are improving the most, we'll soon be able to connect those two datasets to **find the resources that have the most impact on teacher practice**. Our analysts will dive into the t3 data to uncover which tools help teachers most, work with coaches to validate and refine that understanding, and then collaborate with developers at Formative Learning to refine the PD portal's recommendation algorithm. Eventually this algorithm will be smart enough to help teachers find the resources proven most high-impact for other teachers working on the same skills. We'll know which resources are most effective at helping teachers master classroom management, questioning, or small group instruction. This Cycle of Inquiry, similar to the one our teachers use in their classrooms to make data-driven decisions about student learning, will exponentially accelerate the impact of our PD resources on teacher learning.

- **Build a data-driven library of PD resources.** As we deepen our understanding of which PD resources are most effective, we will identify gaps in our PD resource library that will need to be filled. We will fill those gaps by: capturing video of teachers identified by t3 as highest-performing; collecting exemplar lesson plans and student work; and partnering with best-of-breed external PD providers to leverage their resources. By integrating the use of video with the in-person informal observation process we will also be able to effectively "crowd-source" additional content for the PD library. Highly-rated "video-augmented" observations can be automatically shared through the PD, library and our recommendation-engine can deliver these videos to individually-targeted teachers. Furthermore, because we'll be able to track the improvement of teachers who use each PD resource, we'll quickly know which types of resources are effective and which aren't. **By using this information to curate our existing resources and create new tools, we'll be able to build the most effective library of teacher PD tools ever assembled: one that's informed by real data about how teachers improve**. Moreover, because this library will be built on

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Formative Learning, a publicly accessible 3<sup>rd</sup> party software tool, other teachers and schools will be able to take advantage of it.

Together, our coaching technology and data-driven PD library will transform the way we professionally develop our teachers.

**Step 3: Integration into Talent Pipeline**: Currently, our recruiting system is entirely independent of t3's teacher PD tools. We know this is unsustainable.  Once we've developed a reliable system for helping teachers become highly effective, we must adjust our recruiting practices to ensure we're hiring teachers who are able to succeed within our system.  To do so, we must integrate our teacher recruiting system into t3, so that we're applying our lessons learned about teaching across the entire teacher effectiveness life cycle.

By allowing us to tackle these three steps, i3 funds will ensure Aspire teachers not only know where they are today and where they need to go – Aspire teachers will know exactly what they need to do to get there. **For the first time, teachers working in low-income schools will have both a clear path to mastery *and* the integrated support tools and coaching they need to follow that path with success**.  With i3, Aspire will double the number of highly-effective teachers in our schools.  In doing so, we'll generate much-needed learnings for the sector and build a replicable, at-cost tool – so that low-income children everywhere receive the great teaching they deserve.

### Section A(2) Our proposal addresses specific gaps in services, infrastructure, or opportunities.

Aspire teachers have been analyzing student data and creating action plans for *students* for years – solutions like regrouping, re-teaching, and interventions.  However, when it comes to creating action plans for themselves to improve their own *teaching practices*, they struggle. Teachers lack a common definition of expert teaching, lack access to actionable data about their own practice (like the type accessed from benchmark assessments and "exit tickets"), and struggle to find the right PD supports that will enable them to improve particular teaching skills.

That's why two years ago Aspire decided to completely redesign its approach to teacher effectiveness. Thanks to a grant from The Bill and Melinda Gates Foundation, Aspire talent and technology teams have already started to lay the foundation upon which t3 will be built. With the input of our principals and teachers and in collaboration with four other top-performing CMOs, Aspire has created:

1) Clear teaching standards and expectations through our new Danielson-based teaching framework called The College Ready Promise Teacher Effectiveness Rubric (Appendix J)

2) Summative assessments for teachers that incorporate multiple measures of teaching effectiveness (student, parent and peer surveys, student growth percentiles, and formal observations)

3) The technology and processes to support our new approach, including a system to capture observation data, new dashboards for key teacher effectiveness data, and a new learning management system for teacher professional development.

Together, these components will enable us to identify our best teachers and place them on our newly designed career path with incentives to stay in the classroom.

While we're thrilled about these improvements, they will not enable us to completely realize our vision. Both redefining master teaching with a better rubric and refining how teachers are assessed are major steps in the right direction. Neither, however, is sufficient, to transform teaching at Aspire. **Even with a better rubric and better evaluation system, the central question is still left untouched: how professional development helps teachers actually make the changes necessary to become highly effective.** It is as if we have given our teachers a map that shows the top of the mountain and the spot they're standing at, but not the path in between.

Both research and experience tell us that professional development, the way it's done today, is not going to be the game changer we need to close the achievement gap. Our data shows that the most effective type of professional development at Aspire is 1:1 coaching with highly qualified instructional coaches. That coaching, however, is both expensive and very difficult to scale successfully. The work our coaches do is labor intensive, which makes it prohibitively costly – our teachers constantly complain that "there's not enough coach to go around." Our coaches' work is also highly personalized for each teacher, which means it's very difficult to replicate successful practices – we can't "scale" what our best coaches do, because they do something different every day. On the other hand, our use of professional development resources (like seminars, books, and videos), while very cost-efficient and scalable, isn't anywhere near as high-impact. When all our teachers listen to the same lecture or watch the same video, they're getting "one-size-fits-all" PD, which might as well be called "not-a-perfect-fit-for-anyone" PD.

We know from talking to other districts and CMOs in our peer group that multiple leading organizations across the country are redesigning their teacher talent management. It is clear to many in the field that to increase

supply of master teachers, an organization must redesign its evaluation process and teacher career ladder. But most districts/CMOs stop there. **We have not heard of any CMOs or districts that are going as far as we are in using technology to transform teacher practice**. With t3, our PD technology will be fully integrated into all teacher hiring, evaluation, and career ladder systems, enabling us to seamlessly support a teacher across his or her entire lifecycle. With t3, we will fundamentally change both the practice of coaching and the use of PD tools by making both more sustainable and data-driven. Finally, with t3, we will use what we've learned about which teachers ultimately become effective to inform our recruiting practices. We believe this kind of fundamental change is essential if every student at Aspire is going to get the master teacher they deserve.

Through i3, Aspire will create a world-class teacher effectiveness system. **These efforts would certainly address internal organizational gaps, as outlined above; but they would also address key gaps in the broader education movement.** After reviewing Race to the Top proposals and talking with national performance management experts such as the Michael and Susan Dell Foundation, we have concluded that many districts and school networks are investing in data systems; however, few are planning to make teacher effectiveness data transparent, readily available, easily navigable, and linked to professional development resources. Even fewer districts (in fact, none that we or our partners know of) are aiming to create the kind of seamless, integrated system that Aspire's t3 will be.

Because it will be so cutting-edge, t3 will help us to address two key gaps in the research base about teacher effectiveness. So far, researchers know that PD matters – but don't know which specific resources (e.g., videos, sample lesson plans, etc.) have the biggest impact on improvement in teacher practice. Because t3 will allow us to measure the impact that specific PD resources have on teacher behavior, our i3 project will provide cutting edge data on that question. We will have the ability to pinpoint which resources spark the biggest change in teacher practice and the biggest improvement in student performance. Do teachers who couple video with peer observation grow more than teachers who just watch video? Do teachers who view past lesson plans learn more when they view those before or after analyzing their student data? t3 will empower us to address those questions, because it will generate comprehensive reports on PD resources accessed, subsequent teacher observations, and subsequent student achievement. **With that research in hand, other districts will be able to build on our success in creating the resources they need to transform teaching in their schools**.

Another key gap in the research base involves understanding the specific steps teachers should take to improve along discrete teaching standards. At Aspire, we know what to do when a student doesn't understand a specific academic concept, and we've laid out a set of organizational best practices to respond to those academic challenges. But we don't yet have a similar set of best practices for responding to a *teacher* who doesn't understand a specific teaching concept. Our peers – both at CMOs and at districts – have also failed to adequately answer this question. When a first-year teacher struggles with behavioral consistency, what are the steps that we – both at Aspire and in the education community as a whole – should take to support them? When a veteran teacher wants to improve their student relationship building skills, what sorts of activities should they pursue? **Because t3 will track exactly what strategies our coaches and principals recommend to teachers, and whether those strategies actually prove effective, we will be able to answer these key questions**. We will then proactively share the answers externally to improve teaching in schools across the country.

### Section A(3): Our proposal is likely to have a positive impact on student achievement, student growth, and closing the achievement gap.

As has been well documented in a growing body of research, the number one predictor of student achievement is not socioeconomic status or race – it is teacher quality. **We know that raising teacher quality will raise student achievement.** We believe this will happen through three primary methods:

1. **Increased skills of individual teachers**. Our t3 pilot during the 2010-11 school year suggests that student achievement does indeed rise as teachers move up along our College-Ready Promise Teacher Effectiveness Rubric (see Appendix J). Students of teachers with higher-scoring observations grew more on the standardized test than students of teachers with lower-scoring observations. This finding proves that we've "cracked the nut" on what great teaching looks like: when teachers practice in the ways we've defined as highly effective, their students do better than when teachers do not use those highly-effective practices. The next step is to help all Aspire teachers master our highly effective teaching practices. t3 will be our key lever for introducing those practices to teachers, by providing teachers with more effective, efficient, and targeted coaching and PD resources.

2. **Retention of highly effective teachers**. Additionally, Aspire t3 will raise student achievement by improving teacher retention and motivation. We hypothesize – based on external research and our 12 years of experience – that teachers who feel effective and who have opportunities for continuous improvement will be more satisfied in their roles. Daniel Pink's ground-breaking research on motivation confirms what

we already know – one of the most important predictors of job satisfaction is feeling effective. Teachers who feel effective, because they have improved through t3, will be more likely to do what it takes to close the achievement gap and to stay at Aspire for the long-term. Aspire's retention data supports this hypothesis: our most effective teachers are five times less likely to leave Aspire than our regular teaching corps. We also expect great technology tools will help improve retention –both by saving teachers and principals time and by delivering value. As one teacher put it, "I can't leave Aspire – I can't imagine teaching without the [Aspire-created] Teacher Data Portal."

3. **More targeted recruitment of new teachers based on what we are learning from t3 data and analysis**. Due to our rapid growth, Aspire hires over 100-200 new teachers every year. Over the last decade we have iteratively improved new teacher training and support, but we can do a better job of selecting which teachers we bring into that training. We know how to help a novice teacher succeed in the classroom; but we don't yet understand, in a data-driven way, how to select the best novice teachers from the wide pool of applicants we get each year. t3 will enable us to aggregate data over a teacher's entire lifecycle, thereby enabling us to understand how what we see on the selection end will play out in the classroom. We'll use these findings to hire the best possible teachers for our classrooms, thereby increasing our retention rate and decreasing the cost to get each teacher to mastery.

**An i3 grant will enable us to double the number of highly effective teachers working with our 12,000 students**. If we can help all our teachers reach that "highly effective" level, we will drastically increase the number of experienced teachers in front of Aspire students. Once we reach the "tipping point" of 30% highly effective teachers in each of our schools, we expect the trickle-down effect will improve teacher quality at a faster rate than we've ever experienced. Student achievement increases will follow.

t3 will also be easily adopted by other districts and CMOs at an affordable rate. We'll build t3 with the support of the CMO and district partners we are currently working with to create Schoolzilla.org, our shared student achievement analysis tool. By working in concert with external audiences, we will ensure that t3 is a tool that can be easily replicated and shared with other districts.

**Section B: Quality of the Project Design**

**Section B(1): Our proposal has a clear set of goals, an explicit strategy, and actions that align with our priorities, goals, and objectives.**

Our i3 project has three main goals, outlined below. Together, these goals will support the overarching mission of our work: to send every single Aspire student to college, while sharing our successful practices with other forward-thinking educators.

- **Goal 1: Double the number of highly effective teachers in Aspire schools from 15% to 30% of our teaching corps**. We define "highly effective teaching" as teaching that achieves *at least* 1.1 years of student growth in one academic year. Currently, 15% of our teachers meet that rigorous standard, though 75% of our teachers qualify as "effective" (1 year of student growth in one academic year).

- **Goal 2: Cut in half the turnover rates of effective teachers who leave due to job dissatisfaction from 8% to 4%**. As we build out t3, we'll refine these retention goals so that we're retaining *only* those teachers who are on track to be highly effective. (See Appendix J for more on teacher retention).

- **Goal 3: Increase the percentage of first year teachers who finish their first year with an "effective" rating.** After learnings from the first full school year of t3 have been incorporated into recruiting and new teacher training practices, we  expect the percentage of teachers who finish their first year with an "effective" rating to increase. Currently, one third of *new* (less than 2 years' of experience) Aspire teachers perform in the bottom half of all Los Angeles Unified School District (LAUSD) and Aspire teachers, as measured by student growth percentile calculations. In other words, one third of new Aspire teachers perform below the average for all LAUSD and Aspire teachers. With t3, we will halve the number of teachers who perform below average after 2 years at Aspire, so that a full 85% of our new teachers rank *above* average against LAUSD and Aspire teacher performance. Teachers will reach effectiveness more quickly because we will be both hiring teachers better and supporting teachers better once they come into our classrooms.

Though Gates has provided an excellent foundation for t3, strong evaluations and clear teaching standards are not enough on their own to drive teacher improvement. Our strategy is twofold: to both strengthen the linkage between evaluations and real-time PD tools, and to integrate all of our teacher quality initiatives (from recruiting to informal feedback to professional supports) into one seamless system.

Aspire has already assembled a technology innovation team to tackle this formidable challenge. Our group of developers, database architects, visualization experts, and business analysts is known at Aspire as "Godzilla: Data Once Foe, Now Friend." The Godzilla team, with funding from a grant by the Michael and Susan Dell Foundation, has proven its ability to work iteratively and collaboratively with educators to design, implement and rollout the support tools that best support teacher needs. Godzilla-created tools have supported teacher's cycle of inquiry around student achievement, such as one report that received more than 3,500 hits in a single week from our 600 teachers. In response to the many other districts and CMOs who have expressed interest in having access to the same reports and analytic frameworks that Aspire educators use when doing action planning around student achievement, we're currently launching www.schoolzilla.org for all California schools completely free of charge. Already, 35 schools at 5 different California CMOs have signed up for Scoolzilla's pilot phase. Godzilla-created tools have also inspired "edu-preneurs" outside of Aspire. In spring 2011, we shared our Formal Observation tool ("WAGBAT") through youtube.com. We were thrilled to see the response: Formative Learning used it to design their free teacher observation software and several other CMOs asked if they could use it as well.

Throughout t3, we will use the same iterative process that has led to the success of past Godzilla work (see Appendix J for feedback from Aspire educators on Godzilla projects). Because we've had so much success in building technology and data solutions for teachers, we know t3 will also be easy-to-use, tailored to teacher needs, and agile. Many districts and CMOs that want to refine how they use data to inform teacher practice must start from scratch. **Aspire, on the other hand, already has a best-in-class data and technology team in house.**

In addition to our excellent data and technology team, another key strength of our strategy is the **ability to update, refine, and recalibrate the system in real-time**. Home Office staff, principals, and regional superintendents will all have immediate access to the data gathered through t3 (including student performance data, teacher evaluation/observation data, and data on teacher usage of PD resources). With that immediate data, organizational leadership can make quick decisions about improvements to t3. For example, perhaps we'll discover in summer 2012 that principals in one third of our schools use the informal observation tools frequently, inputting teacher data into t3. But another two thirds of principals rarely use these tools. In response, we would convene a focus group of the principals who infrequently use these tools so that we can understand – and then fix – the challenges before the next school year begins. By constantly checking in on how every aspect of t3 is working for

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our school-based staff, we will ensure that t3 accomplishes its goals of transforming the quality of teaching in Aspire classrooms.

**Section B(2) and B(3): Our proposal's estimated costs and costs to scale to 100K, 250K, and 500K students.**
The total projected cost to create and implement t3 at Aspire is $3.45 million over four years. When fully operational, 800 teachers who instruct 12,000 students will use the system.

Our **start-up costs** are as follows:

- Over the project grant, we will spend $200 per student in start-up costs

- Start-up costs over the grant will total $2,397,803, broken out as follows:

    o Year 1: $1,101,415

    o Year 2: $797,155

    o Year 3: $400,909

    o Year 4: $98,323

Our **operating costs** (not including our ongoing i3 evaluation) are as follows:

- The annual operating cost is $17 per student for ongoing support and maintenance by Year 4

- Operating costs over the course of the grant will total $625,261, broken out as follows:

    o Year 1: $87,127

    o Year 2: $126,626

    o Year 3: $204,458

    o Year 4: $207,051

 See figure B-1 for more information.

*Figure B-1: Aspire Costs broken down by Operating and Start-up (not including evaluation costs)*

| i3 Expense Category | Description | Operating Costs | | | | Total Over 4 Years | Start-up Costs | | | | Total Over 4 Years |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | dev/pilot 2012 Y1 | pilot/revise/ rollout 2013 Y2 | rollout/ expand 2014 Y3 | rollout/ expand 2015 Y4 | Y1-Y4 | dev/pilot 2012 Y1 | pilot/revise/ rollout 2013 Y2 | rollout/ expand 2014 Y3 | rollout/ expand 2015 Y4 | Y1-Y4 |
| 1. Personnel | Personnel ($000) | 38,563 | 50,181 | 69,277 | 71,355 | 229,376 | 325,999 | 342,727 | 192,235 | 59,554 | 920,515 |
| 2. Fringe Benefits | Fringe ($000) 20% | 7,713 | 10,036 | 13,855 | 14,271 | 45,875 | 65,200 | 68,545 | 38,447 | 11,911 | 184,103 |
| 3. Travel | Travel and Trainings | - | - | 4,000 | 4,000 | 8,000 | 8,000 | 20,000 | 16,000 | 4,000 | 48,000 |
| 4. Equipment | Tech for remote coaching @ site | 25,000 | 50,000 | 80,000 | 80,000 | 235,000 | 145,000 | 120,000 | - | - | 265,000 |
| 6. Contractual | Evaluators | - | - | - | - | - | | | | | - |
| 6. Contractual | External Consultants - SW Devel | - | - | 20,000 | 20,000 | 40,000 | 300,000 | 100,000 | 30,000 | - | 430,000 |
| 6. Contractual | Recruiting System - configuration | 14,000 | 14,000 | 14,000 | 14,000 | 56,000 | 54,000 | - | - | - | 54,000 |
| 6. Contractual | Development of Teacher Support | - | - | - | - | - | 200,000 | 100,000 | 80,000 | 20,000 | 400,000 |
| 10. Indirect Costs | Indirect ($000) 4.8% | 1,851 | 2,409 | 3,325 | 3,425 | 11,010 | 3,217 | 10,882 | 9,227 | 2,859 | 26,185 |
| 11. Training Stipends | Teacher Data Driver (Train-the-T | - | - | - | - | - | - | 35,000 | 35,000 | - | 70,000 |
| | Total | 87,127 | 126,626 | 204,458 | 207,051 | 625,261 | 1,101,415 | 797,155 | 400,909 | 98,323 | 2,397,803 |
| | # Students | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 |
| | Cost per Aspire Student | $ 7 | $ 11 | $ 17 | $ 17 | $ 52 | $ 92 | $ 66 | $ 33 | $ 8 | $ 200 |

Other CMOs and districts who want to adopt all aspects of t3 would spend significantly less per student because their startup costs would be lower. They would build on our past investment, using the online service offering we will create in conjunction with our partner Formative Learning. They would not need to repeat our build costs, which include: Program Management; design, build, and refine the Informal Observation tool; creation of PD content; and creation of PD recommendation engine.

Aspire has a track record of sharing directly with others where possible (e.g., schoolzilla.org) and working with aligned vendors if sharing directly is infeasible (e.g., Formative Learning). If we base the scale up costs of t3 on the current pricing of vendors like Formative Learning, the *licensing* cost to scale to 100K, 250K or 500K students (assuming 20:1 student to teacher/admin) would be roughly $5 per student per year. In addition to the licensing costs, we estimate $17 per student per year in ongoing internal costs for support and maintenance (e.g., tech support). Therefore, the cost for other districts and CMOs would be **$22 per student per year**.

Though other CMOs and districts would build on Aspire's past investment, they would have to incur some costs themselves during the start-up phase. Those start-up costs would include: 1) school-based technology to support remote coaching; 2) train-the-trainer programs like our Data Drivers program; and 3) integration of talent pipeline into district recruiting practices. We estimate the costs of these to be approximately $354,000 for Aspire or $30/student). We have therefore added an additional **one-time $30 per student as start-up cost** for districts aiming to scale t3.

The resulting scale up costs for 100,000 students (with a 4% savings from economies of scale) would require $2,880,000 for startup and $2,112,000 annually. To scale to 250,000 (with a 10% savings from economies of scale) would require $6,750,000 for startup and $4,950,000 annually. To scale to 500,000 students (with a 20% savings from economies of scale) would require $12,000,000 for startup and $8,800,000 annually. See Figure B-2 for more detail.

*Figure B-2: Scale up Cost Estimates for t3*

| | | Scenario | | |
|---|---|---|---|---|
| # students | | 100,000 | 250,000 | 500,000 |
| One-time cost | $ 30 | 3,000,000 | 7,500,000 | 15,000,000 |
| Annual cost | $ 22 | 2,200,000 | 5,500,000 | 11,000,000 |
| | | | | |
| Economies of Scale | 2% | (120,000) | (750,000) | (3,000,000) |
| per 50,000 students | 2% | (88,000) | (550,000) | (2,200,000) |
| | | | | |
| One-time cost | | 2,880,000 | 6,750,000 | 12,000,000 |
| Annual cost | | 2,112,000 | 4,950,000 | 8,800,000 |

**Section B(4): Our proposal has high potential to be incorporated into our ongoing work and into the work of any partners.**

Successful design and roll-out of t3 is one of Aspire's top priorities—and one of our core strategies for boosting student achievement—and therefore we have committed staff, time and financial resources to anticipate and address needed capacity-building issues. Resources required to develop and implement t3 are heavily concentrated during the four-year grant period. Once the system is implemented, maintenance costs can be accommodated easily within Aspire's operational budget, as most of the ongoing costs will replace fees we currently

pay to software providers for the piecemeal systems we currently use. After implementation, the cost of the remaining support team will be spread across the user base and can be absorbed by what we estimate will be an $85M organizational operational budget. This support team will provide technical support and training to all users throughout the life of t3 and will perform required system upgrades and maintenance.

Though the Godzilla team will absorb the vast majority of the responsibility and leadership to develop and implement t3, Aspire's educational team will be integral to Aspire's success at the design, implementation and roll-out stages. t3 is a tool for the educational team, not the technology solutions group—the Godzilla team will work with Aspire's educators from day one to ensure that they are shaping the vision of t3, providing input into its design, participating in usability testing, and ultimately, rolling the tools out in conjunction with their practices. A smaller team will continue to provide ongoing support and system maintenance in conjunction with the product support provided by vendors. Sufficient time and staff resources have been budgeted for training and implementation support during the grant period to ensure users understand and can leverage the tools. The budget includes training stipends for teachers to provide an incentive to invest time in learning the t3 tools.

It's also worth noting that the vast majority of t3 costs are one-time investments in building out technology tools. Once we have built those technology tools through i3 funding, the costs for upkeep and ongoing improvement will be much lower and almost entirely related to technical support, as explained above. Through a one-time investment in Aspire's t3, the Department of Education will help create a tool that will develop highly effective teachers for years to come.

Of course, we will continue t3 at Aspire even after the i3 grant expires. But we also want to see t3 implemented in other school districts and CMOs. **We are committed to sharing what we've learned with others – both through our research learnings and through the technology tool we've created.** In 2011-12, Aspire will serve 12,000 students (75% of them low-income) in 34 schools in three discrete CA regions. As a major local player and a national model, Aspire holds the attention of change-makers in CMOs and districts across the country. We've received accolades for both our education and technology teams. In 2010, McKinsey and Company selected Aspire as one of only 20 "most improved school systems in the world."[1] We've been invited to share technology best

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[1] Mourshed, Mona, Chijioke, Chinezi and Barber, Michael. "How the World's Most Improved School Systems Keep Getting Better." McKinsey and Company, 2010.

practices with districts and CMOs in conferences around the country. Oprah Winfrey selected Aspire to appear on a special episode of her show honoring excellence in education. Our CEO has spoken to the United States Congress and meets regularly with state policy leaders in Sacramento. **Because of our position as a thought leader, we will be able to share our t3 technology and intellectual capital with others throughout the sector.**

Of course, being seen as a thought leader is necessary for people to pay attention to our work, but it's not sufficient to spark change in other schools and classrooms. We must also work proactively to ensure broader adoption of t3 tools and learnings. As outlined above, we will work closely with the districts and CMOs that we are currently partnering with through The College Ready Promise and Schoolzilla.org. We will share t3 with those audiences at regular intervals to get their feedback on usability outside of Aspire. We will integrate those learnings into t3, designing the system iteratively with feedback from teachers at Aspire, teachers at our partner CMOs, and teachers at our Schoolzilla.org partner districts. **At the end of the grant cycle, we will have a t3 product that we can share, at competitive rates, with other districts and CMOs.** We will couple the t3 product with consulting and implementation services from the Godzilla staff who designed the tool.

**We know that we can build a sharable, replicable technology tool because we have done so already.** Godzilla has found outlets for sharing its successful solutions via entrepreneurs such as Formative Learning, a start-up incorporating the perspectives of Aspire educators and technologists in its differentiated learning platform software. Sixty-three schools representing about 2,000 teachers and administrators have signed up before the service has even launched officially, including one that cancelled a three year contract with another vendor to migrate to Formative Learning. Godzilla has also directly shared its solutions with other school districts and CMOs through http://www.schoolzilla.org, a service Aspire created as a pilot for sharing more than just PowerPoint slides with others who want to replicate what we've done. We will continue to consider both of these strategies as we begin work on t3. For example, we will identify a strategic partner in order to create the informal observation tool in a way that can be leveraged by other organizations.

Finally, we will proactively share our research learnings about what specific interventions produced which improvements in teaching practice with an even broader audience. We will actively disseminate our learnings with our contacts at other CMOS and districts; we will build new partnerships with other thought leaders in the sector, such as The New Teacher Project and The Center for Teacher Quality, providing both qualitative and quantitative

data on our learnings; and we will present at conferences and contribute to white papers. Consistent with the requirements of this grant program, we will also actively participate in our U.S. Department of Education Community of Practice and will make our interim and final evaluations broadly available through both formal (e.g., peer reviewed journals) and informal means (e.g., print and electronic newsletters).

**Section C: Quality of the Project Evaluation**

Project evaluation will address three indicators of project success: (1) ongoing progress of the project toward implementation timelines and deliverables; (2) the impact on teacher effectiveness, as measured by our multi-measure assessment tool; and (3) student achievement, including goals for the overall participant population and for students at risk, including ELL, Special Ed, low SES, and ethnic groups (Latino and African-American)

For our i3 evaluation, Aspire will work with Empirical Education (EE), a CA-based evaluation firm that is currently leading evaluations for an i3 2010 winners. (See Appendix F for further credentials of EE). EE will be supported in their work through two key partnerships. First, they will leverage the work that RAND Corporation is currently conducting on our behalf. Funded by the Bill and Melinda Gates Foundation, RAND is looking at the impact that our new teacher evaluation and new teacher effectiveness rubric have on student achievement. EE will build on these findings, partnering with RAND to access the baseline data they have already gathered. Second, EE will work alongside our university partner, Professor Shannon Anderson at U.C. Davis's School of Management. Professor Anderson has deep experience in researching the impact of data/technology platforms on employee productivity. She's partnering with us in our t3 roll-out to understand what happens when a technology platform like this is rolled out to a large group of people all engaged in the same professional tasks (i.e., teaching).
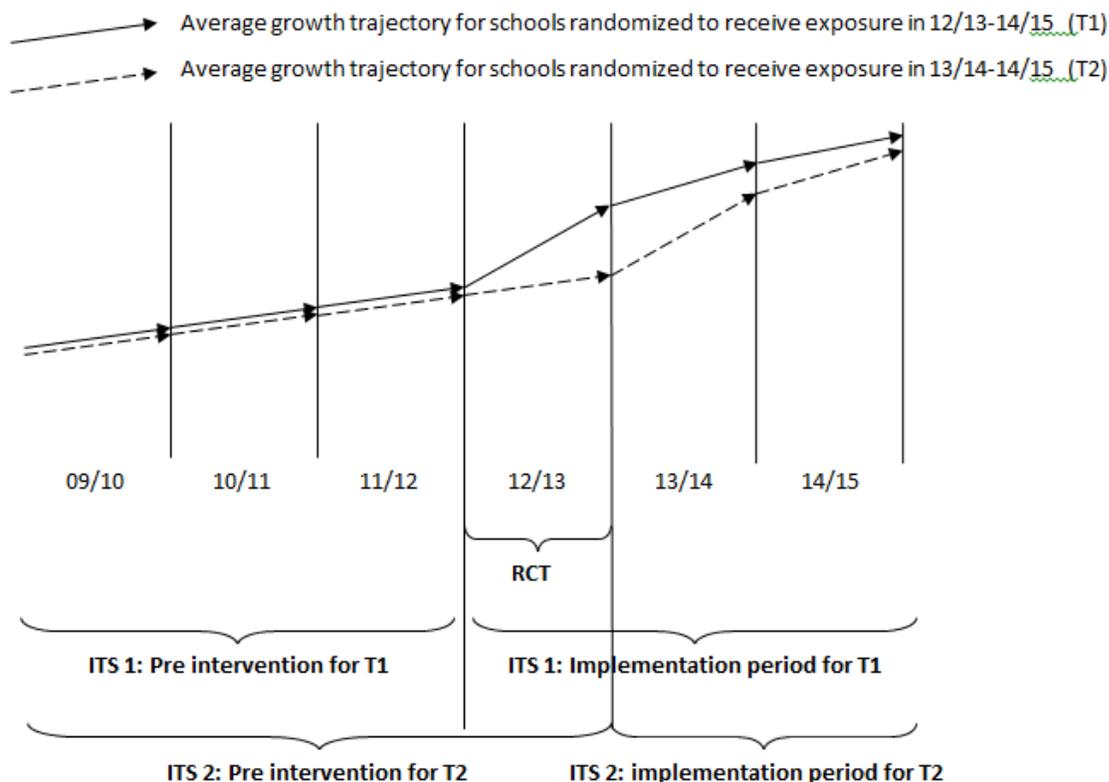
The evaluation will seek to obtain reliable evidence of the effect of t3 on teacher practices and the subsequent impact on high-needs students' achievement and attainment. The evaluation will have two elements. First, EE will provide quarterly implementation updates on project progress that summarize the activities of t3 development, results of usability testing and progress against benchmarks. Second, an impact evaluation will address the following primary research question: To what extent does t3 drive an increase in teacher effectiveness and in student achievement?

We will answer these questions through a hybrid evaluation that combines both quasi-experimental study and randomized control trial. These reports will be designed to both inform the analysis of the program effects and to improve the program model and implementation.

Quarterly updates will provide continuous feedback to the project leadership and will provide a way to track implementation at each of the sites. The implementation study and formative feedback data will assess progress toward project goals, using a set of benchmarks developed for the project. This regular data collection will enable Aspire to 1) track t3 development and viability, 2) identify contextual variables impacting the implementation of the program, and 3) once pilot trials begin, assess the implementation model. Implementation data will be collected at delivery of training, and at classroom (teachers), building (principals), and district support levels (coaches). A key outcome of the implementation investigation is a well-documented process with benchmarks that will enable others to replicate the model as it proceeds from inception to roll-out. In addition to quarterly reports, Aspire and EE will produce yearly impact estimates.

The evaluation will take advantage of the staggered roll out of the intervention with 17 schools (the T1 group) randomly assigned to receive t3 starting in School 2012-13, with another 17 schools (the T2 group) randomly assigned to receive t3 starting in school year 2013-14. Figure 1 below depicts schematically the performance trajectories for the two groups. The design will allow both short-term experimental and long-term quasi-experimental estimates of the impact, as described below.

Figure 1: Schematic of performance trajectories for schools in the t3 evaluation

→ Average growth trajectory for schools randomized to receive exposure in 12/13-14/15 (T1)

⇢ Average growth trajectory for schools randomized to receive exposure in 13/14-14/15 (T2)

09/10      10/11      11/12      12/13      13/14      14/15

RCT

ITS 1: Pre intervention for T1      ITS 1: Implementation period for T1

ITS 2: Pre intervention for T2      ITS 2: implementation period for T2

**Randomized Control Trial (RCT):**

Empirical Evaluation will conduct a group randomized trial (Bloom, 2005) with schools randomized to the two conditions (See Appendix D for full references). They will be blocked by district, with assignment conducted within blocks. The trial will yield estimates of the average 1-year impact of the intervention on student and teacher outcomes as implemented in School Year 2012-13. Student outcomes will be determined by: 1) reading and math scores on the California Standards Test (CST); and 2) results on Aspire's network-wide periodic benchmark assessment. Teacher outcomes will be measured through annual evaluations along the College Ready Promise Teacher Effectiveness Rubric, which all principals and coaches will be trained in during Fall 2014.

The focus of the RCT is on the short-term impact of the program. RCTs have the advantage of yielding unbiased effect estimates barring certain threats to internal validity such as differential attrition. Threats to validity will be monitored. Moderator analyses will be conducted to examine whether the effect of the program varies based on teacher and student background characteristics, including ELL status and pretest level.

Critical for investigating how t3 works is the question of the mediating effects of instructional changes on student achievement. EE will explore whether impacts on students are mediated by impacts on teacher outcomes as measured by the observational teacher evaluations. The evaluators will use the approach to mediation analysis of Krull and MacKinnon (2001) (including the software PRODCLIN, MacKinnon et al., 2007) demonstrated at the 2010 IES research conference (Stapleton, 2010).

**Statistical power**:

The variance almanac (https://arc.uchicago.edu/reese/variance-almanac-academic-achievement) yields plausible values for the intraclass correlation coefficient (ICC) and school-level R-squared for the RCT. Limiting the prospective sample to urban districts in the Western US and low SES schools for grades 3-12 and assuming a cluster randomized trial, the total sample of 34 schools is adequate to detect an MDES of .20 on student achievement in math or reading. Although the schools involved are expected to have different ranges of grade levels, as part of a development grant, the goal is to evaluate whether there is a general impact that cuts across grade levels.

As an exploration, EE will also apply methodology developed by Peck (2003), Schochet and Burghard (2007) and Unlu et al. (2010) who examine impacts under conditions where teachers implement with fidelity or where students receive an adequate 'dose' of the intervention. The approach uses pre-randomization characteristics of participants, and a measure of implementation (or level of exposure), to estimate impacts for strong implementers. For this analysis, EE will work with the developers to identify criteria for teachers to be considered strong implementers and for students to be considered as receiving the program under adequate implementation and with sufficient exposure.

Impacts will be estimated using hierarchical linear models (Raudenbush and Bryk, 2002; Singer, 1998) as applied to cluster randomized trials (Bloom, Bos and Lee, 1999). In the event that scores are not expressed in terms of a common metric they will be transformed appropriately to allow analyzing results together (e.g., by z-transforming outcomes).

**Interrupted Time Series and Difference in Differences**

A quasi-experimental (QE) methodology will be yoked to the experimental approach. The design is meant to estimate longer-term average impacts for students (e.g., average impact with two or three years of exposure to t3)

than the RCT is designed to assess. EE will use methodology for investigating short interrupted time series (ITS) (Bloom, 2003) supplemented by a difference-in-differences analysis as outlined below.

Empirical will apply the 'baseline-mean' short ITS model (Bloom, 2003), but expanded to accommodate the intervention being introduced in two separate years for the two mutually exclusive sets of 17 schools each. Outcomes for the two sets of schools will be analyzed together but with a covariate added to indicate whether the program is introduced in SY 12-13 or SY 13-14. Student level data with linkages to teachers and schools will allow analysis of effects with properly adjusted standard errors reflecting the design.

ITS designs are dynamic. After the first year of implementation, available data will effectively limit analysis to a 'successive cohorts design'. The RCT will give the definitive result for impact after one year, while the ITS will give the more-definitive measure of efficacy as results accumulate. Each additional year of data collection will lead to a refinement of the impact estimate as more data are integrated into analysis. This will give us a full-fledged ITS design for estimating the impact over the longer term. The ITS analysis will take advantage of having de-identified student data linked to teachers and schools over a period from before and after the introduction of the intervention. This will allow an HLM-based analysis of the efficacy of t3.

Aspire has budgeted $425,000 for the evaluation over four years.

## Section D: Quality of the Management Plan

### Section D(1): Our management plan ensures that we will achieve our objectives on time and within budget.
**Approach to Project Management**

In all its large-scale projects, Aspire has emphasized establishing governance structures and practices that ensure projects serve end user needs, meet organizational goals and are completed on time and within budget. For t3, the governance and management includes: 1) a **Steering Committee,** composed of three members of Aspire's Education Leadership Team, to address all questions of strategy, major expenditures and scope; 2) a **Program Management Structure,** which includes the Project Director, Lynzi Ziegenhagen, responsible for realizing the vision through the day-to-day management of resources; and 3) a **Technology Advisory Board,** composed of experts from other organizations who have dedicated their careers to tackling large, complex technology projects in

a variety of industries, and have experience in technology governance, technical architecture and business operations.

During development of t3, Aspire will use best practice project management processes that have proven successful within Godzilla, starting with creating a project plan with goals, measures of success, scope, schedule, risks and risk mitigation plans, stakeholder communication, and initial training and support plans. During project execution, we manage scope, risk, budget, and quality through time tracking, weekly project reviews and monthly steering committee meetings.

Throughout i3, we'll remain committed to ensuring the project's sustainability and scalability. We are always committed to investing grant money in a way that builds structural capacity. Through these efforts, **we will ensure that the project is both sustainable and scalable**. We will ensure sustainability and scalability by focusing on three key strategies:
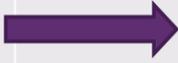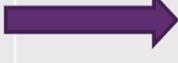
1. Usability - We strive to never compromise on usability – not in selecting existing products and not in creating our own. We invest in usability tests and iterative design, and we hold the user's opinion in extremely high regard. Usable tools have significantly lower training and support costs.

2. Flexibility - Where things are likely to change significantly during and after the grant period (e.g., reporting, intranet), we invest up front in tools/data infrastructure that enables us to be more flexible and responsive (at a low cost) when things do change.

3. Philosophically Aligned Vendors – We search out vendors that are philosophically aligned with Aspire's vision, influence them as much as possible as they grow, and expect to benefit from the vendor's own ongoing investment in improving its solution. In this case, by partnering with Formative Learning, we will be able to depend on their technology team for support in the long-term.

**Milestones**

Below, we've laid out milestones for the two elements of our project that will extend across the entire life of the project: the evaluation and ongoing program management.

| | Work-stream | Spring 2012 | Fall 2012 | Spring 2013 | Fall 2013 | Spring 2014 | Fall 2014-Fall 2015 |
|---|---|---|---|---|---|---|---|
| **Ongoing program manage-ment** | Manage program | • Complete hiring<br>• Kickoff program | • Monitor milestones and key performance indicators | | | | |
| | Build technical data infrastructure | • Establish sustainable data infrastructure to support ongoing analysis | • Maintain and refine data infra-structure | | | | |
| **Ongoing evalua-tion** | Conduct evaluation | • Finalize evaluation plan, developing data collection processes<br>• Collect baseline data | • Gather and analyze data, refining processes as needed | | | | |
| | Report findings to external audiences | | | | Produce and share interim report | | • Produce and share final report |

Below, we've laid out milestones for the three key steps of our project: building technology supports for coaching, creating customized, data-driven PD tools, and integrating our learnings into our talent pipeline.

| | Workstream | Spring 2012 | Fall 2012 | Spring 2013 | Fall 2013 | Spring 2014 | Fall 2014 – Fall 2015 |
|---|---|---|---|---|---|---|---|
| **Build technology supports for coaching** | Build and refine remote coaching tools | • Remote coaching system design phase complete | • Remote coaching launched at pilot schools | • Refine technology and processes based on pilot data | • Remote coaching implemented across all school sites | • Ongoing training and support | → |
| | Build and refine informal observation tools | • Design observation tool | • Build prototype observation tool | • Launch v1 in pilot schools | • Launch v2 in all schools | • Support tool and analyze informal observation data | → |
| | Build and refine coaching dashboard | • Complete coaching dashboard needs analysis | • Design and build prototype dashboard | • Launch v1 in pilot schools | • Launch v2 in all schools | • Continue to evolve and support processes and tools | → |
| **Create customized, data-driven PD resources** | Create and refine PD content and individualization tool | • Complete initial content gap analysis and fill top 15 PD content areas; launch in pilot schools | • Complete initial analysis of teacher PD usage<br>• Add PD for all content areas | • Launch v1 recommendation engine | • Launch v2 recommendation engine<br>• Produce new resources to fill gaps identified in v1 recommendation engine | • Ongoing analysis to refine recommendation engine and identify key gaps<br>• Ongoing development/acquisition of new PD resources to fill those gaps | → |
| **Integrate learnings into talent pipeline** | Integrate learnings into talent pipeline | • Implement new recruiting system | • Analyze initial data | • Refine recruiting processes based on initial data | • Ongoing data analysis, process refinement, and technical support | → | |
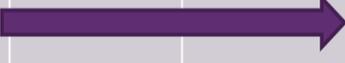
## Staffing

Below, we've mapped key staff to each major activity to ensure accountability and clearly defined roles and responsibilities.

| | Workstream | Primary Owner(s) |
|---|---|---|
| **Ongoing program management** | Manage program | • Project director, Director of Technology Solutions (Lynzi Ziegenhagen) |
| | Build technical data infrastructure | • Project director, Director of Technology Solutions (Lynzi Ziegenhagen)<br>• Director of Teaching and Learning Technology (Anna Utgoff)<br>• Database Architect (Rich Kretschmer) |
| **Ongoing evaluation** | Conduct evaluation | • Empirical Education<br>• U.C. Davis Professor of Management (Shannon Anderson) |
| | Report findings to external audiences | • VP of Education (Heather Kirkpatrick)<br>• Director of Talent Strategy (Carrie Douglass) |
| **Build technology supports for coaching** | Tech. support for coaching – remote | • Director of Teaching and Learning Technology (Anna Utgoff)<br>• Director of Talent Strategy (Carrie Douglass)<br>• College Ready Promise Instructional Coach (James Gallagher) |
| | Tech. support for coaching – informal observation | • Director of Teaching and Learning Technology (Anna Utgoff)<br>• Director of Talent Strategy (Carrie Douglass)<br>• College Ready Promise Instructional Coach (James Gallagher) |
| | Tech support for coaching - dashboard | • Director of Teaching and Learning Technology (Anna Utgoff)<br>• Director of Talent Strategy (Carrie Douglass)<br>• College Ready Promise Instructional Coach (James Gallagher) |
| **Create customized, data-driven technology tools** | Create and refine PD content and indivualization tool | • Director of Data and Assessments (John Ericson)<br>• Director of Talent Strategy (Carrie Douglass)<br>• Project Director, Director of Technology Solutions (Lynzi Ziegenhagen) |
| **Integrate learnings into talent pipeline** | Integrate learnings into talent pipeline | • Project director, Director of Technology Solutions (Lynzi Ziegenhagen)<br>• Director of Talent Strategy (Carrie Douglass) |

**Section D(2): Our project director and key project personnel are well-qualified, especially in managing projects of the size and scope of the proposed project.**

The Project Director is Lynzi Ziegenhagen, who built and leads the Godzilla team. She will be supported by Anna Utgoff, Director of Teaching and Learning Technology.

The deep experience the Godzilla team brings from past work at both other companies and at Aspire is a unique asset that will allow Aspire to develop, pilot and bring t3 to scale faster and more cost effectively than most other districts or CMOs could. The Godzilla core team members have held important roles in a variety of companies ranging from technology-focused startups, to large, highly successful companies like Goldman Sachs, KPMG and Bain and Company. In these companies, our staff have built data warehouses, designed large-scale process

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efficiency programs and managed systems that fueled triple-digit growth and delivered massive value to investors. Beyond the team's experience at other companies, the Godzilla team has experience in developing and implementing solutions similar to t3 at Aspire. Appendix J highlights specific projects in more detail.

The work will be led by a seasoned education and IT professional, Lynzi Ziegenhagen. Lynzi has been with Aspire Public Schools since 2007 and serves as our Director of Technology Solutions. She spent her first year at Aspire creating demonstration web applications that grew the organization's interest in and use of data capabilities—and led to the creation of the "Godzilla" team. Ziegenhagen has deep expertise in using technology and developing software to solve organizational challenges: she has run her own consulting business serving nonprofits and has managed projects and created solutions for organizations as diverse as The Children's Partnership, where she advised community technology centers across California, to the Department of Defense, where she initiated and led a large systems design and implementation effort involving 33 stakeholders across 14 different organizations.

Director of Teaching & Learning Technology Anna Utgoff specializes in user needs analysis and change management.  Her work at Aspire has included the design and implementation of our learning management system and our SharePoint 2010-based collaboration platform.   She brings a deep understanding of teachers' perspectives to her work, developed through close collaboration with Aspire educators and her own previous experience as a Teach for America corps member. Prior to joining Aspire, she worked as a consultant and led strategic change in a wide variety of public and private sector organizations, most recently at Bain & Company.

The evaluation will be led by Empirical Education, an evaluation firm with deep experience in similar education projects. In fact, they are currently partnering with a 2010 i3 winner to conduct their evaluations. More background on their experience is available in Appendix F.